

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An image decoding method for generating a predictive pixel value of a current picture to be decoded, using ~~A moving picture prediction method for predicting pixel values in a picture that forms a moving picture based on pixel values in of two reference pictures, and decoding the current picture using the predictive pixel value,~~ the method comprising:

a first parameter calculation step of calculating a first parameter corresponding to a temporal distance between ~~[[a]]~~ the current picture and a first reference picture;

a second parameter calculation step of calculating a second parameter corresponding to a temporal distance between the first reference picture and a second reference picture;

a ~~first~~ judgment step of judging whether or not a value of a third parameter calculated based on the first and the second parameters is included in a predetermined range ~~or not~~;

a predictive pixel value generation step of

(i) generating a predictive pixel value of a first prediction step of calculating pixel values in the current picture by scaling a pixel value of the first reference picture and a pixel value of the second reference picture using a weighting coefficient calculated by the first parameter and the second parameter, in a case where it is judged, in said ~~based on the first and the second parameters and pixel values in the first and the second reference pictures when a result of the judgment in the first judgment step, shows that the value of the third parameter is~~ included in the predetermined range, ~~[[;]]~~ and

(ii) generating a predictive pixel value of a second prediction step of calculating pixel values in the current picture by scaling a pixel value of the first reference picture and a

pixel value of the second reference picture using a weighting coefficient of a predetermined value, in a case where it is judged, in said~~based on predetermined values and pixel values in the first and the second reference pictures when a result of the judgment in the first judgment step,~~
shows that the value of the third parameter is not included in the predetermined range; and
a decoding step of decoding the current picture using the predictive pixel value calculated in said predictive pixel value generation step.

2-18. (Canceled)

19. (New) An image decoding apparatus which generates a predictive pixel value of a current picture to be decoded, using pixel values of two reference pictures, and decodes the current picture using the predictive pixel value, said apparatus comprising:

a first parameter calculation unit operable to calculate a first parameter corresponding to a temporal distance between the current picture and a first reference picture;

a second parameter calculation unit operable to calculate a second parameter corresponding to a temporal distance between the first reference picture and a second reference picture;

a judgment unit operable to judge whether or not a value of a third parameter calculated based on the first and second parameters is included in a predetermined range;

a predictive pixel value generation unit operable to

(i) generate a predictive pixel value of the current picture by scaling a pixel value of the first reference picture and a pixel value of the second reference picture using a weighting

coefficient calculated by the first parameter and the second parameter, in a case where said judgment unit judges that the value of the third parameter is included in the predetermined range, and

(ii) generate a predictive pixel value of the current picture by scaling a pixel value of the first reference picture and a pixel value of the second reference picture using a weighting coefficient of a predetermined value, in a case where said judgment unit judges that the value of the third parameter is not included in the predetermined range; and

a decoding unit operable to decode the current picture using the predictive pixel value calculated by said predictive pixel value generation unit.

20. (New) A data recording medium on which a program for decoding an image signal is stored,

wherein the program causes a computer to execute the decoding using the image decoding method according to Claim 1.

21. (New) An image coding method for generating a predictive pixel value of a current picture to be coded, using pixel values of two reference pictures, and coding the current picture using the predictive pixel value, said method comprising:

a first parameter calculation step of calculating a first parameter corresponding to a temporal distance between the current picture and a first reference picture;

a second parameter calculation step of calculating a second parameter corresponding to a temporal distance between the first reference picture and a second reference picture;

a judgment step of judging whether or not a value of a third parameter calculated based on the first and second parameters is included in a predetermined range;

a predictive pixel value generation step of

(i) generating a predictive pixel value of the current picture by scaling a pixel value of the first reference picture and a pixel value of the second reference picture using a weighting coefficient calculated by the first parameter and the second parameter, in a case where it is judged, in said judgment step, that the value of the third parameter is included in the predetermined range, and

(ii) generating a predictive pixel value of the current picture by scaling a pixel value of the first reference picture and a pixel value of the second reference picture using a weighting coefficient of a predetermined value, in a case where it is judged, in said judgment step, that the value of the third parameter is not included in the predetermined range; and

a coding step of coding the current picture using the predictive pixel value calculated in said predictive pixel value generation step.

22. (New) An image coding apparatus which generates a predictive pixel value of a current picture to be coded, using pixel values of two reference pictures, and codes the current picture using the predictive pixel value, said apparatus comprising:

a first parameter calculation unit operable to calculate a first parameter corresponding to a temporal distance between the current picture and a first reference picture;

a second parameter calculation unit operable to calculate a second parameter corresponding to a temporal distance between the first reference picture and a second reference picture;

a judgment unit operable to judge whether or not a value of a third parameter calculated based on the first and second parameters is included in a predetermined range;

a predictive pixel value generation unit operable to

(i) generate a predictive pixel value of the current picture by scaling a pixel value of the first reference picture and a pixel value of the second reference picture using a weighting coefficient calculated by the first parameter and the second parameter, in a case where said judgment unit judges that the value of the third parameter is included in the predetermined range, and

(ii) generate a predictive pixel value of the current picture by scaling a pixel value of the first reference picture and a pixel value of the second reference picture using a weighting coefficient of a predetermined value, in a case where said judgment unit judges that the value of the third parameter is not included in the predetermined range; and

a coding unit operable to code the current picture using the predictive pixel value calculated by said predictive pixel value generation unit.

23. (New) A data recording medium on which a program for coding an image signal is stored,

wherein the program causes a computer to execute the coding using the image coding method according to Claim 21.